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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 10/675,886 | 09/30/2003 | Christian Leth Petersen | 00900.0302-US-C1 | 6811 |

7590 02/07/2005
Michael B. Lasky
Altera Law Group
Suite 100
6500 City West Parkway
Minneapolis, MN 55344-7704

| EXAMINER |
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KOBERT, RUSSELL MARC

| ART UNIT | PAPER NUMBER |
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2829

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,886

Applicant(s)

PETERSEN ET AL.

Examiner

Russell M. Kobert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 65-139 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 65-139 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2829

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 65-130, drawn to apparatus, classified in class 324, subclass 762.
- II. Claims 131-139, drawn to method of making, classified in class 29, subclass 846.

2. The inventions are distinct, each from the other because:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a process that does not produce a third multitude of conductive tip elements extending from the distal end of the first multitude of conductive probe arms.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

5. Upon an election of Invention I, further election of species is required as follows:

This application contains claims directed to a multi-point probe comprising the following patentably distinct species of the claimed invention:

- (a) the second multitude of areas being swaged in relation to the plane of the first surface of the supporting body
- (b) the second multitude of areas being elevated in relation to the plane of the first surface of the supporting body
- (c) the second multitude of areas being in co-planar relation with the first surface of the supporting body between the first multitude of conductive probe arms
- (d) the second multitude of areas being combinations of swaged, elevated and co-planar in relation to the plane of the first surface of the supporting body
- (e) the second multitude of areas undercut the first multitude of conductive probe arms on the supporting body providing a supporting surface of the supporting body smaller than the surface of the conductive probe arms facing the supporting body
- (f) the first multitude of conductive probe arms are unidirectional, constituting a first multitude of parallel free extensions of the supporting body
- (g) the supporting body further comprises a second surface parallel to the first surface, and the multi-point probe further comprises an additional multitude of conductive probe arms defining a proximal end and a distal

end being positioned in co-planar relationship with the second surface of the supporting body, and the additional conductive probe arms being connected to the supporting body at the proximal ends thereof and having the distal ends freely extending from the supporting body, giving individually flexible motion to the additional multitude of conductive probe arms

- (h) the first multitude of conductive probe arms are in a multiple of 2, ranging from at least 2 conductive probe arms to 64 conductive probe arms
- (i) the first multitude of conductive probe arms have a substantially rectangular cross section defining: the dimension of width as a distance between the lines of the rectangular cross section perpendicular to the plane of the first surface of the supporting body, the dimension of depth as a distance between the lines of the rectangular cross section parallel to the plane of the first surface of the supporting body, and the dimension of length as a distance from the proximal end of the conductive probe arms to the distal end of the conductive probe arm
- (j) the first multitude of conductive probe arms have a ratio of length to width within the range of 500:1 to 5:1
- (k) the first multitude of conductive probe arms have a ratio of width to depth within the range of 20:1 to 2:1
- (l) the first multitude of conductive probe arms have a ratio of width to depth of 10:1

- (m) the first multitude of conductive probe arms have tapered elements extending from the distal end of the conductive probe arms
- (n) the first multitude of conductive probe arms have pointed shaped elements extending from the distal end of the conductive probe arms
- (o) the first multitude of conductive probe arms have enlarged circular elements extending from the distal ends of the conductive probe arms
- (p) the first multitude of conductive probe arms have elliptic elements extending from the distal ends of the conductive probe arms
- (q) the first multitude of conductive probe arms have orthogonal squared elements extending from the distal ends of the conductive probe arms
- (r) the first multitude of conductive probe arms have the lengths in the range of 20 μm to 2 mm
- (s) the first multitude of conductive probe arms have a separation of distal ends of the conductive probe arms in the range of 1 μm to 1 mm
- (t) the supporting body is of a ceramic material.
- (u) the supporting body is of a semiconducting material.
- (v) a third multitude of conductive tip elements extending from the distal end of the first multitude of conductive probe arms; and , the conductive tip elements originating from a process of metallization of electron beam depositions on the first multitude of conductive probe arms at the distal ends thereof

- (w) reciprocating means for moving the multi-point probe relative the test sample so as to cause the conductive probe arms to be contacted with the specific location of the test sample for performing the testing of electric properties thereof

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, at least one of claims 65 or 122 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

Art Unit: 2829

the prior art, the evidence or admission may be used in a rejection under 35

U.S.C. 103(a) of the other invention.

6. Upon an election of Invention II, further election of species is required as follows:

This application contains claims directed to a method of making a multi-point probe comprising the following patentably distinct species of the claimed invention:

- (a) the technique of applying the conductive probe arms in co-planar and facial relationship with the supporting wafer body involves at least one of microfabrication technique, planar technique, CMOS technique, thick-film technique, and thin-film technique
- (b) the third multitude of conductive tip elements originate from a process of tilted electron beam deposition
- (c) the third multitude of conductive tip elements originate from a process of perpendicular electron beam deposition
- (d) the third multitude of conductive tip elements originate from a process of a combination of tilted electron beam deposition and perpendicular electron beam deposition
- (e) the metallization of said third multitude of conductive tip elements originates from a process of in-situ metallic deposition
- (f) the metallization of said third multitude of conductive tip elements originates from a process of ex-situ metallic deposition

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 131 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Art Unit: 2829

7. A telephone call was made to the Office of the Attorney of Record on February 2, 2005 to request an oral election to the above restriction requirement, but did not result in an election being made.

8. A shortened statutory period for response to this action is set to expire one month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (571) 272-1963. The Examiner's Supervisor, Nestor R. Ramirez, can be reached at (571) 272-2034. For an automated menu of Tech Center 2800 phone numbers call (571) 272-2800.



Russell M. Kobert
Patent Examiner
Group Art Unit 2829
February 3, 2005



VINH NGUYEN
PRIMARY EXAMINER

A. U. 2829

02/03/05